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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 08/470,051 | 06/06/95 | HARVEY | J 5634.268 |

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26M1/0213

EXAMINER

| ART.UNIT | PAPER NUMBER |
|----------|--------------|
| 2619 | 2 |

DATE MAILED: 02/13/97

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/470,051

Applicant(s)

Harvey et al.

Examiner

James Groody

Group Art Unit

2619



☒ Responsive to communication(s) filed on 6/6/95 and 1/30/96

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 2-53 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 2-53 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Part III DETAILED ACTION

1. This action is in response to the amendment(s) filed 6/6/95, and 1/30,96.

2. This action will not attempt to determine the effective filing date of this application. The action will apply art against the claims using two possible effective filing dates, i.e. serial number 06/317,510, filed November 3, 1981, and serial number 07/096,096, filed September 11, 1987. Applicants can overcome the art rejections by establishing that the art applied does not meet the claimed limitations or that the art does not have an early enough filing date.

The action will make initial double patenting rejections presuming that all of the present claims were fully disclosed in both the '81 and '87 cases.

In any rejections made under 35 U.S.C. 112, first paragraph, applicants will be asked to clarify, where required by the examiner, how the present claims are fully disclosed in both the '81 and '87 cases.

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3. Applicants are reminded of their duty to maintain a line of patentable demarcation between related applications. It has been noted by the PTO that many of the pending applications have similar claimed subject matter. In the related 327 applications (the serial numbers are included in a list below), it is estimated that there may be between 10,000 and 20,000 claims. Applicants should insure that substantially duplicate claims do not appear in different cases, and should bring to the PTO's attention instances where similar claims have been treated inconsistently, i.e. rejected in one case but not in another.

4. Applicants are cautioned that their continual use of alternatives in the claims raises questions concerning the exact claim meaning. More importantly, it raises questions whether the disclosure supports every possible embodiment or permutation that can be created by the alternative language.

5. The double patenting rejections in this action are based on the premise that all of the present claims were fully disclosed in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414.

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Since there was a restriction made in 5,233,654, there will be no double patenting made on that patent or 5,335,277.

6. The PTO's copies of the parent files are in poor form since they have been copied many times by members of the public. The files also are missing some of the papers. The double patenting rejections below presumes that there were no requirements for restriction made in any of the parent files.

7. There are three types of double patenting rejections:

- a) Statutory double patenting rejection under 35 U.S.C. 101,
- b) Nonstatutory obvious type double patenting,
- c) Nonstatutory non-obviousness type double patenting.

In this action, the rejections of the third type that are directed to the claims of the parent patented files will have two different versions. The first rejects the claims because they have not been established to be independent and distinct from the patented claims. The second version includes that premise, and further supports the rejection by establishing that

representative claims from this application have common subject matter with representative ones of the patented claims.

8. Claims 2-53 (all of the claims in this application) are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414 since the claims, if allowed, would improperly extend the "right to exclude" already granted in those patents.

The subject matter claimed in the instant application is fully disclosed in the patents and is covered by the patents since the patents and the application are claiming common subject matter, as follows: a signal processing apparatus and method including an interactive communications system apparatus and method. Furthermore, there is no apparent reason why applicants were prevented from presenting claims corresponding to those of the instant application during prosecution of the parent applications which matured into patents. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

A review of the claims in each of the four parent patents (5,109,414; 4,964,825; 4,704,725; 4,694,490) was made. These

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patented claims do not appear "independent and distinct" from the claims in this application. The present claims are directed to a method and apparatus for controlling communications including television communications or programming. The claims in patent 5,109,414 were directed to a processing system and method for signal distribution including television. The claims in patent 4,965,825 were directed to a system and process for signal processing including carrier communications. The claims in patent 4,704,725 were directed to a method of communicating data to receiver stations. The claims in patent 4,694,490 were directed to a method for communicating and processing television programs.

Applicants' invention can be envisioned at in three parts. As with most cable TV systems, there is a head end station which generates the video programming. Applicants have included an intermediate station which receives transmissions, from the head end or subscriber stations, and distributes the programming to each subscriber. The subscriber station receives the programming, and can communicate to the intermediate station with requests or instructions. Even if the claims directed to each station were "independent and distinct" from the claims directed

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to the other stations, there would be no reason to "restrict" between the three stations since their overall function is so interrelated that the stations have the same search area, i.e the PTO could not establish a burden if required to search for all three stations.

It is believed that CCPA in *Schneller* used the "independent and distinct" standard as the main factor in its determination that the double patenting rejection should be affirmed. The CCPA stated that the fundamental reason supporting the principle of non-statutory double patenting rejections is to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the extension is brought about. Further the CCPA stated at 158 USPQ 210 (214):

"... To conform to this reason and to prevail here, appellant has the burden of establishing that the invention in his patent is "independent and distinct" from the invention of the appealed claims. The public policy considerations underlying 35 U.S.C. 121 permit separate patents on "independent and distinct" inventions which are initially "claimed in one application." The statute places initial responsibility for this determination on the Commissioner of Patents. Where, as here, no such determination has been made, it is necessary to scrutinize carefully an applicant's voluntary alleged determination of this issue for it can lead to the improper proliferation of patents on the same invention with the inherent result of extending timewise a patentee's right to exclude others from

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the invention disclosed in the original application and on which his patent has issued."

The CCPA further stated at page 215 the length of time between an earlier patent and a later filed application should be considered. The filing date of this application was over seven years after the first patent issued (serial number 06/317,510, filed November 3, 1981, patented as 4,694,490 on September 15, 1987) and over four years after the first CIP issued as a patent (serial number 07/096,096, filed September 11, 1987, patented as 4,965,825 on October 23, 1990).

To the extent that one would view *Schneller* and *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986) to be in conflict, it is clear that *Schneller* is the controlling precedent to the factual situation here. In *Schneller*, the Court specifically distinguished a situation of the same applicant from one where the application and patent had different inventive entities. In *Kaplan*, the inventive entities between the patent and application were different, as was required at the time of the *Kaplan* invention, since *Kaplan*'s filing date was before the Patent Law Amendments Act of 1984. In this present case, as with *Schneller*, the inventive entities of the application and patent

are the same. Clearly, Kaplan was required, or entitled, to file separate applications, whereas applicants and Schneller did not have reason to do so. Finally, decisions of a three-judge panel of the Federal Circuit cannot overturn prior precedential decisions of the CCPA. See *UMC Elec. Co. v. United States* 2 USPQ2d 1465.

9. Claims 2-53 (all of the claims in this application) are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414 since the claims, if allowed, would improperly extend the "right to exclude" already granted in those patents.

This rejection incorporates the rejection above. That double patenting rejection is further supported by *Schneller* because the great majority of the patented claims are "comprising" type claims.¹ While it is recognized that the specific claim limitations in the application may not have been

¹The claims that recite neither "comprising" nor "consisting" are considered to recite open claim language, i.e. equivalent to "comprising". See, for example, claim 1 of Patent 5,109,414.

claimed in the patents, this alone does not establish grounds for overcoming this rejection. The patent claims were directed to parts of applicants' total disclosed system or process.

Therefore the recitation of "comprising" enables those patented claims to "cover" claim features now recited by applicants' present application claims.

Since the head end, intermediate, and subscriber stations are part of the overall system, claims to one part "cover" the other part(s) under the *Schneller* decision (page 215), since the preferred embodiment would include all three parts of the main system, i.e. head, intermediate, and subscriber stations. For example, claims to the subscriber station still cover the intermediate station because the subscriber station would be processing information that had to come from the intermediate station. A second example would be that claims to one aspect or function of the intermediate station would cover the invention of another aspect or function of the intermediate station since both functions could be performed with the other. Applicants' disclosed system includes similar features in the head, intermediate, and subscriber stations. For example, the stations can transmit and receive, and have computer, processor and

controller capabilities. For that reason, the disclosure will permit broadly drafted claims to read on either the head, intermediate, or subscriber station. Patent claims that recite receiving and transmitting can cover both intermediate and subscriber stations. The fact that patent claims and application claims are directed to different elements does not prohibit this rejection if there is common or interrelated subject matter recited. The Court in *Schneller* stated at page 215:

"... They "cover" the preferred form ABCXY, common to the patent and this application, in the same sense. The fact that X and Y are distinct elements, performing, independent functions, so that either can be employed without the other, does not change this fact. Neither does appellant's omission of reference to the lip Y from his patent claims."

Application claim 45 is a representative claim. It is directed to a method of controlling at least one or a plurality of receiver station by receiving an instruct signal, receiving one or more control signals which operate at the receiver station to communicate the instruct signal to a specific processor, transferring the instruct signal and one or more control signals to a transmitter and transmitting the one or more control signals and instruct signal, wherein the instruct signal causes the

receiver station to implement a scheme for locating, identifying, or assembling a control signal.

A review of representative ones of the patented claims will demonstrate that the patented claims cover the invention claimed in this application:

a) In patent 4,694,490, claim 7 is representative of the claimed method for communicating TV program information to a receiver station. The receiver station receives the video data, displays it, detects the presence of overlay information using an instruct signal, and has computers generate and transmit this overlay info to the display.

b) In patent 4,704,725, claim 3 is representative, and, as summarized below, recites a method of communicating data comprising:

- a) multiple receivers, each with a computer,
- b) transmitting instruct to transmit signals to the computers,
- c) detecting the signals and coupling them to the selected computers,
- d) having the computers control their own selected output device.

c) In patent 4,965,825, claim 24 is representative, and, as summarized below, recites generating a computer output having the steps of:

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- a) having multiple receivers, each with a computer,
 - b) transmitting an instruct to generate signal to the computers,
 - c) causing the computers to generate individual user output information.
- d) In patent 5,109,414, claim 15 is representative, and, as summarized below, recites a signal processing system (including):

- a) receiver/distribution means,
- b) switch means,
- c) control signal detector means for transferring data to storage means,
- d) storage means for storing and transferring data to processor means,
- e) processor means for controlling.

While claim 15 is an apparatus claim, a method claim and apparatus claim do not in themselves establish groups that are "independent and distinct".

The patented claims are also primarily directed to methods or structure to control element(s) either directly at that station or at another remote station. This control is generally completed with the reception or recognition of an instruct signal. The same common concept exists in application claim 45. All of the claims, both patented and pending in this application, when considered together, effectively recite parts of the preferred embodiment, i.e. a head, intermediate, and subscriber

station. The patented claims "cover" the claims of the application because the patented limitations do not exclude the limitations of this application.

In the arguments above, the examiner, when discussing several of the patents, stated that the patented claims were broad enough to read on multiple stations. While it is believed this analysis is correct, it is not critical to this rejection. Since the patented claims recite limitations that are interrelated with other similar features claimed in this application, it is the examiner's position that those patented claims "cover" the application claims because all of these claimed features (both in the patent and application) describe what is effectively the preferred embodiment.

The claims in this application, if allowed without a terminal disclaimer, would continue patent protection of the preferred embodiment, i.e. the complete system of the head, intermediate, and subscriber stations, beyond the expiration of applicants' parent patents.

10. It is acknowledged that a multiplicity rejection was mailed on July 27, 1989 in parent file 07/096,096. In this rejection, the examiner had limited the applicants to 25 claims.

Schneller did not equate a multiplicity rejection with a restriction requirement as a permissible exception to being subject to the non-obvious non--statutory double patenting rejection. For that reason, this action will not overturn the legal reasoning in *Schneller* which supports the non-statutory non-obviousness double patenting rejection above.

It is believed, however, that applicants arguments on this multiplicity issue can be better supported if a nexus is established between the claims of this application and those that were canceled in 07/096,096 in response to the multiplicity requirement.

Notwithstanding the comment above, at the time the examiner made the multiplicity rejection, there was a body of case law that had overturned similar rejections. Note *In re Flint* 162 USPQ 228 (CCPA 1969) and *In re Wakefield*, 164 USPQ 636 (CCPA 1970).

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11. A determination of a possible non-statutory double patenting rejection obvious-type in each of the related 327 applications over each other will be deferred until a later time. This action is taken in view of the possibility that many of these applications may be abandoned or merged.

12. Claims 2-53 are rejected under the judicially created doctrine of double patenting over the claims of copending U.S. application 08/113,329 and the following related U.S. applications (all of the application are series 08):

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| # | Ser. No. | # | Ser. No. | # | Ser. No. |
|----|----------|----|----------|----|----------|
| 1 | 397371 | 2 | 397582 | 3 | 397636 |
| 4 | 435757 | 5 | 435758 | 6 | 437044 |
| 7 | 437045 | 8 | 437629 | 9 | 437635 |
| 10 | 437791 | 11 | 437819 | 12 | 437864 |
| 13 | 437887 | 14 | 437937 | 15 | 438011 |
| 16 | 438206 | 17 | 438216 | 18 | 438659 |
| 19 | 439668 | 20 | 439670 | 21 | 440657 |
| 22 | 440837 | 23 | 441027 | 24 | 441033 |
| 25 | 441575 | 26 | 441577 | 27 | 441701 |
| 28 | 441749 | 29 | 441821 | 30 | 441880 |
| 31 | 441942 | 32 | 441996 | 33 | 442165 |
| 34 | 442327 | 35 | 442335 | 36 | 442369 |
| 37 | 442383 | 38 | 442505 | 39 | 442507 |
| 40 | 444643 | 41 | 444756 | 42 | 444757 |
| 43 | 444758 | 44 | 444781 | 45 | 444786 |
| 46 | 444787 | 47 | 444788 | 48 | 444887 |
| 49 | 445045 | 50 | 445054 | 51 | 445290 |
| 52 | 445294 | 53 | 445296 | 54 | 445328 |
| 55 | 446123 | 56 | 446124 | 57 | 446429 |
| 58 | 446430 | 59 | 446431 | 60 | 446432 |
| 61 | 446494 | 62 | 446553 | 63 | 446579 |
| 64 | 447380 | 65 | 447414 | 66 | 447415 |
| 67 | 447416 | 68 | 447446 | 69 | 447447 |
| 70 | 447448 | 71 | 447449 | 72 | 447496 |
| 73 | 447502 | 74 | 447529 | 75 | 447611 |
| 76 | 447621 | 77 | 447679 | 78 | 447711 |
| 79 | 447712 | 80 | 447724 | 81 | 447726 |
| 82 | 447826 | 83 | 447908 | 84 | 447938 |
| 85 | 447974 | 86 | 447977 | 87 | 448099 |
| 88 | 448116 | 89 | 448141 | 90 | 448143 |
| 91 | 448175 | 92 | 448251 | 93 | 448309 |

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| 94 | 448326 | 95 | 448643 | 96 | 448644 |
| 97 | 448662 | 98 | 448667 | 99 | 448794 |
| 100 | 448810 | 101 | 448833 | 102 | 448915 |
| 103 | 448916 | 104 | 448917 | 105 | 448976 |
| 106 | 448977 | 107 | 448978 | 108 | 448979 |
| 109 | 449097 | 110 | 449110 | 111 | 449248 |
| 112 | 449263 | 113 | 449281 | 114 | 449291 |
| 115 | 449302 | 116 | 449351 | 117 | 449369 |
| 118 | 449411 | 119 | 449413 | 120 | 449523 |
| 121 | 449530 | 122 | 449531 | 123 | 449532 |
| 124 | 449652 | 125 | 449697 | 126 | 449702 |
| 127 | 449717 | 128 | 449718 | 129 | 449798 |
| 130 | 449800 | 131 | 449829 | 132 | 449867 |
| 133 | 449901 | 134 | 450680 | 135 | 451203 |
| 136 | 451377 | 137 | 451496 | 138 | 451746 |
| 139 | 452395 | 140 | 458566 | 141 | 458699 |
| 142 | 458760 | 143 | 459216 | 144 | 459217 |
| 145 | 459218 | 146 | 459506 | 147 | 459507 |
| 148 | 459521 | 149 | 459522 | 150 | 459788 |
| 151 | 460043 | 152 | 460081 | 153 | 460085 |
| 154 | 460120 | 155 | 460187 | 156 | 460240 |
| 157 | 460256 | 158 | 460274 | 159 | 460387 |
| 160 | 460394 | 161 | 460401 | 162 | 460556 |
| 163 | 460557 | 164 | 460591 | 165 | 460592 |
| 166 | 460634 | 167 | 460642 | 168 | 460668 |
| 169 | 460677 | 170 | 460711 | 171 | 460713 |
| 172 | 460743 | 173 | 460765 | 174 | 460766 |
| 175 | 460770 | 176 | 460793 | 177 | 460817 |
| 178 | 466887 | 179 | 466888 | 180 | 466890 |
| 181 | 466894 | 182 | 467045 | 183 | 467904 |
| 184 | 468044 | 185 | 468323 | 186 | 468324 |
| 187 | 468641 | 188 | 468736 | 189 | 468994 |

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| 190 | 469056 | 191 | 469059 | 192 | 469078 |
| 193 | 469103 | 194 | 469106 | 195 | 469107 |
| 196 | 469108 | 197 | 469109 | 198 | 469355 |
| 199 | 469496 | 200 | 469517 | 201 | 469612 |
| 202 | 469623 | 203 | 469624 | 204 | 469626 |
| 205 | ***** | 206 | 470052 | 207 | 470053 |
| 208 | 470054 | 209 | 470236 | 210 | 470447 |
| 211 | 470448 | 212 | 470476 | 213 | 470570 |
| 214 | 470571 | 215 | 471024 | 216 | 471191 |
| 217 | 471238 | 218 | 471239 | 219 | 471240 |
| 220 | 472066 | 221 | 472399 | 222 | 472462 |
| 223 | 472980 | 224 | 473213 | 225 | 473224 |
| 226 | 473484 | 227 | 473927 | 228 | 473996 |
| 229 | 473997 | 230 | 473998 | 231 | 473999 |
| 232 | 474119 | 233 | 474139 | 234 | 474145 |
| 235 | 474146 | 236 | 474147 | 237 | 474496 |
| 238 | 474674 | 239 | 474963 | 240 | 474964 |
| 241 | 475341 | 242 | 475342 | 243 | 477547 |
| 244 | 477564 | 245 | 477570 | 246 | 477660 |
| 247 | 477711 | 248 | 477712 | 249 | 477805 |
| 250 | 477955 | 251 | 478044 | 252 | 478107 |
| 253 | 478544 | 254 | 478633 | 255 | 478767 |
| 256 | 478794 | 257 | 478858 | 258 | 478864 |
| 259 | 478908 | 260 | 479042 | 261 | 479215 |
| 262 | 479216 | 263 | 479217 | 264 | 479374 |
| 265 | 479375 | 266 | 479414 | 267 | 479523 |
| 268 | 479524 | 269 | 479667 | 270 | 480059 |
| 271 | 480060 | 272 | 480383 | 273 | 480392 |
| 274 | 480740 | 275 | 481074 | 276 | 482573 |
| 277 | 482574 | 278 | 482857 | 279 | 483054 |
| 280 | 483169 | 281 | 483174 | 282 | 483269 |
| 283 | 483980 | 284 | 484275 | 285 | 484276 |

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| # | Ser. No. | # | Ser. No. | # | Ser. No. |
|-----|----------|-----|----------|-----|----------|
| 286 | 484858 | 287 | 484865 | 288 | 485282 |
| 289 | 485283 | 290 | 485507 | 291 | 485775 |
| 292 | 486258 | 293 | 486259 | 294 | 486265 |
| 295 | 486266 | 296 | 486297 | 297 | 487155 |
| 298 | 487397 | 299 | 487408 | 300 | 487410 |
| 301 | 487411 | 302 | 487428 | 303 | 487506 |
| 304 | 487516 | 305 | 487526 | 306 | 487536 |
| 307 | 487546 | 308 | 487556 | 309 | 487565 |
| 310 | 487649 | 311 | 487851 | 312 | 487895 |
| 313 | 487980 | 314 | 487981 | 315 | 487982 |
| 316 | 487984 | 317 | 488032 | 318 | 488058 |
| 319 | 488378 | 320 | 488383 | 321 | 488436 |
| 322 | 488438 | 323 | 488439 | 324 | 488619 |
| 325 | 488620 | 326 | 498002 | 327 | 511491 |
| 328 | 485773 | | | | |

The subject matter claimed in the instant application is fully disclosed in the referenced copending applications and would be covered by any patent granted on that copending applications since the referenced copending applications and the instant application are claiming common subject matter, as follows: a signal processing apparatus and method including an interactive communications system apparatus and method.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the

instant application in the other copending applications. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

A review of the claims in the related copending applications was made. These claims do not appear independent and distinct from the claims in this application. It is believed that CCPA in *Schneller* used the "independent and distinct" standard as the main factor in its determination that the double patenting rejection should be affirmed. The relevant arguments in the preceding paragraphs in support of this position are incorporated herein.

13. The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d

887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 2-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention.

The examiner must be able to determine the meets and bounds of the claims to perform an effective search and analysis over the art. The examiner is not certain that the meets and bounds of these claims can be determined because of the language in the

disclosure and claims. For example, the disclosure teaches many transmitter and receiver stations, instruct signals, control signals, decoders, etc. (This is just a partial list of terms in applicants' disclosure that apply to plural elements in that disclosure.) When these phrases are claimed, the examiner needs to know "which" element in the disclosure is performing the claimed step. For example, when a hypothetical claim recites "transmitter station", and the disclosure teaches different ones (those in the origination, intermediate, and subscriber stations), the examiner needs to be able to envision what applicants could be claiming.

Applicants' assigned multiple meanings to words in a claim makes a claim indefinite.

Traditionally, examiners "diagram" claims to determine the meets and bounds. To explain what "diagraming" means, the examiner attempts to draw a picture (generally a circuit or a connection of block elements in an electrical application) which represents what was claimed so that the examiner can visualize how a mythical reference could anticipate the claim, if the claim was given its broadest reading. If the claim recites terms or phrases that have multiple meanings in the disclosure, the

examiner can't determine whether the diagram of the claim is correct. Given this, how can the examiner determine whether or not the scope of the art searched for is commiserate with the broadest reading of the claim?

Admittedly, the size of applicants' disclosure with its numerous possible implementations is contributing to the problem, but the problem does exist. Applicants are being requested to reference the claim limitations in this application to the disclosure so that the meets and bounds of these claims can be properly considered. This can be done in a remarks section, the claims do not have to be amended.

15. Claims 2-9,11-16,18-33,37 and 41-53 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are instances when a limitation is claimed either in the preamble or the body of the claim, and then, again later in the claims, without being prefaced by "the" or said". Applicants should confirm whether the same limitation is being claimed the second time:

claim 2, lines 7 and 9, "processor",
claim 6, lines 8 and 12, "control signals",
claim 11, line 10, "instruct signals",
claim 14, lines 6 and 7, "data...source", and line 10,
"data" and "instruct signal",
claim 15, line 13, "remote station",
claim 18, lines 13,14,15, and 16, "instruct signal",
"transmitter", "receiver station", and "control
signal", respectively,

claim 21, lines 14,15,18, and 19, "signal word",
"transmitter", "control signal", and "control
signals", respectively,
claim 25, last line, "transmitter",
claim 26, lines 11 and 12, "control signal" and "instruct
signals", respectively,
claim 29, lines 8,11,12 and 16, "receiver station", "control
signal", "control signals" and "transmitter",
respectively,
claim 37, line 24, "processor",
claim 41, lines 9,11, and 14, "control signals",

claim 42, lines 9 and 13, "control signals",
claim 43, line 14, "timing signal",
claim 45, lines 7 and 10, "instruct signal" and "control
signals", respectively,
claim 47, lines 2 and 7, "transmitter" and line 2,
"receiver",
claim 48, line 2 "transmitter" and "control signal", line 7,
"instruct signals", and line 12, "instruct
signal".
claim 49, lines 3 and 6, "receiver station" and line 6,
"control signal",
claim 50, line 21, and claim 52, line 3, "remote station".

Is the "target processor" in claim 6, line 9, the same as the
"processor" in line 2? In claim 15, lines 6 and 7, how can a
"control signal" assemble a "control signal"? Is the "collection
site" in claim 26, line 10, the same as the "collection station"
of line 3? In claim 31, line 5, there is no antecedent for
"collection site". Note same objection to "ancillary processor"
in claim 37, line 28. Claims 47 and 48 recite signal(s). It is
not clear whether any of these signal(s) were those previously
claimed. The limitations of these claims should be referenced to

the drawings. In claim 50, line 15, is the "remote site" the same as the "remote station" of line 14?

1) In line 7 of claim 2, the term "some" is confusing and should be deleted.

2) In lines 12 and 13 of claim 6, "said one or more control signals" is indefinite because it has multiple antecedent basis when referred back to line 3 and to line 12.

4) In line 8 of claim 6, "said downloadable executable code" is indefinite because it has multiple antecedent basis when referred back to line 4 and to line 6. Similar clarification is needed in line 13, lines 15 and 16, and in claims 7, 8, & 9.

5) In line 6 and 7 of claim 11, "said specific subscriber input" does not have clear antecedent basis and is indefinite. Further, this recited terminology is confusing because it is not clear to what the terminology refers and how the recited terminology differs from the previously recited "inputted reaction" [note the terms *must* refer to different things if the recitations of lines 8 and 9 are to have any reasonable meaning]. Clarification is needed.

6) In line 14 of claim 11, "confirming delivery of said instruct signal" is indefinite because a step of delivering has never been recited.

7) In line 15 of claim 11, "said effect" has no antecedent basis and is indefinite.

8) Lines 5-7 of claim 15 are confusing and indefinite because it is not clear what is meant by identifying a code resource to locate, identify, or assemble "a control signal or a control signal" to effect a scheme for locating, identifying, or assembling "a control signal"; i.e. are the three recited control signals related and, if so, how? In view of the three recitations of "a control signal" in lines 5-7, "said control signal" in line 8 has multiple antecedent basis and is indefinite.

9) In claim 15, line 8, "said resource" has multiple antecedent basis and is indefinite when referred back to the "resource" recited in line 1 and to the "resource" recited in line 5.

10) In claim 18, line 14 and 14, "said instruct signal" has multiple antecedent basis and is indefinite(note line 10,

line 11, and line 13). Similar clarification is needed in claims 19, 21, 23, 24, and 25.

11) In claim 18, line 20, "said one or more control signals" is indefinite because it has multiple antecedent basis when referred back to line 9 and line 17.

12) In claim 26, lines 18 and 19, "said one or more instruct signals" is indefinite because it has multiple antecedent basis when referred back to 7 and to line 12.

13) In claim 26, line 20, "said control signal" is indefinite because it has multiple antecedent basis when referred back to line 9 and line 11.

14) In claim 27, line 1, "said one or more receiver specific data" has multiple antecedent basis and is indefinite.

15) In claim 29, lines 12 and 13, "said one or more control signals" is indefinite because it has multiple antecedent basis when referred back to the recitation of line 4 and of line 12. Similar clarification is needed in line 15, in lines 17-18, and in claim 32.

16) In claim 31, line 5, "said remote data collection site" has no antecedent basis and is indefinite.

17) In claim 33, "said mass medium program" is indefinite because it has multiple antecedent basis when referred back to the recitations in line 5 of claim 29 and in line 14 of claim 29.

18) In claim 34, line 7 and line 9, both occurrences of "said control signal" are indefinite because they have multiple antecedent basis when referred back to the recitations of "a control signal" in line 5 and in lines 6 and 7.

19) In each of lines 9, 11, and 14 of claim 45, the term "the instruct signal" is indefinite because the term has multiple antecedent basis. Thus, it is not clear to which of the previous recitations the term is intended to refer. Similar clarification is needed for the term "the one or more control signals in line 14.

20) In line 8 of claim 47, "said transmitter" is indefinite because it has multiple antecedent basis when referred back to the recitations in line 2, in line 7, and in claim 45.

21) In claim 50, line 7, "said information" is indefinite because it has multiple antecedent basis when referred back to the recitation of line 1 and the recitation of line 3.

22) In claim 50, line 11, "said data" does not have clear antecedent basis and is indefinite. If the term "said data" is intended to refer back to the "datum" recited in line 8, then the recitation of "datum" in the alternative (i.e. the use of the "or" in line 8) is confusing and erroneous; i.e. for "said data" to have antecedent basis said "datum" must be stored.

16. The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to provide an enabling disclosure.

The following common phrases were not disclosed in the '87 case. It is questioned where, in the '87 disclosure, is there support for an operational embodiment using the established meaning of these terms:

react, reaction, or instruct-to-react
query or querying.

17. Claims 8,10-14,29-33,35,37, and 39-42 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

18. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter noted above. See 37 C.F.R. § 1.75(d)(1) and M.P.E.P. § 608.01(1).

19. The following common phrases were not disclosed in the '81 case. It is questioned where, in the '81 disclosure, is there support for an operational embodiment using the established meaning of these terms:

product (claims 31 and 37)
resource (claim 15)
coordinated or instruct-to-coordinate (claim 36).

20. It is questioned where in the '81 disclosure, is there support for the embedded signal representing executable code (claim 7).

21. Claims 37 and 53 are rejected under 35 U.S.C. § 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What is meant by "combined or sequential" or "simultaneous or sequential"? Where is this concept disclosed in the '81 or '87 cases?

22. Claim 37 is rejected under 35 U.S.C. § 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What is meant by "separately defined"? The '81 and '87 cases only refer to it in terms of a decoding path. (See col. 20, lines 19-27 in the '825 patent.) How is this brief recitation being used with analog and digital TV?

23. The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to provide an enabling disclosure. What do applicants mean by "digital television"? Please reference both the '81 and '87 cases to define this term. It appears that this was not disclosed in the '81 case. The '87 case refers to "digital video" numerous times, and "digital

television" once. It is not clear whether applicants are using these terms interchangeably. Applicants should provide support and/or arguments, with references to the two disclosures, why their brief mention of digital television provided an enabling disclosure.

24. Claim 37 is rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

25. Claims 50-53 are rejected under 35 U.S.C. § 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The '87 case did not disclose the terms "prompting" or "promoting". What do they mean as used in the claims? And why would this usage not be new matter?

26. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

27. Claims 2, 4-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedger et al.

The Showing of Hedger et al.:

1) The examiner takes Official Notice that TV broadcasting systems were notoriously well known in the art at the time of applicant's alleged invention. Said conventional TV broadcasting systems included TV broadcasting stations which transmitted scheduled TV programming to a plurality remote TV receivers (e.g. to remote TV receivers located at the households of TV viewers) [note the second paragraph in the first column on page 560

of Hedger et al.]. The examiner also takes Official Notice that it was notoriously well known in the art for the TV broadcasting stations of said conventional TV broadcasting system to have comprised additional transmission circuitries required for the transmission of "normal" teletext services to teletext decoders located at said remote TV receivers (e.g. "ORACLE"). In such cases, said conventional TV broadcast systems also included a) a database computer which stored information representing numerous teletext pages, b) said database computer which operated to have selectively retrieved information representing ones of said teletext pages according to a predetermined transmission schedule, c) means at said TV broadcasting stations for receiving the retrieved teletext pages and for transmitting said received pages along with the transmitted TV programming by embedding said received pages in the vertical blanking intervals of said transmitted programming, d) a plurality of teletext decoders located within respective ones of said TV receivers which operated to have received, extracted, stored, and selectively displayed ones of the transmitted teletext pages on a CRT of the respective TV

receiver, and e) each teletext decoder which comprised a programmable MPU for controlling the operations of the decoder via resident control program stored within said decoder [note: the discussion in the second column on page 556 of Hedger et al.; and lines 13-16 in the first column on page 560 of Hedger et al.].

2) Hedger et al. has been cited because it evidences that those skilled in the art had, at the time of applicant's alleged invention, recognized the desire of having provided every household with a personal computer terminal which was both user friendly and familiar [see lines 1-8 in the first column on page 556]. Likewise, Hedger et al. evidences that those skilled in the art had recognized that the TV receivers which comprised teletext decoders, i.e. specifically those TV receivers of the conventional TV broadcasting systems described in part "1" of this paragraph, were in fact prime candidates for implementing the desired personal computer terminals in that they already comprised most of the components needed to implement personal computers (ie the keyboard, page memory, program memory, MPU, CRT, etc...) and they were already very

familiar items within the household of the potential users [see the discussion in the second column on page 556].

Thus, by making the simple and inexpensive modifications proposed by Hedger et al. [note the last paragraph in the second column on page 556], each of the TV receivers of the conventional TV broadcasting systems served a further role as a personal computer terminal.

3) To make the newly formed computer terminals as user friendly as possible, Hedger et al. recognized the need to load and run desired computer programming into the newly formed computer terminals in a user friendly manner. To accomplish this, Hedger et al. taught modifying said conventional broadcast system structure so as to have allowed the broadcast system to distribute "Telesoftware" to the MPUs of the TV receiver terminals [see lines 34-40 in the first column on page 558]; ie wherein the term "Telesoftware" had been coined by those skilled in the art so as to have specifically referred to the broadcasting/downloading of computer programming as part of said normal teletext services [note: lines 16-22 in the

first column on page 560 of Hedger et al.]. The following is noted:

1) In order to have broadcasted computer programs, i.e. "executable code", as part of said "normal" teletext services, Hedger et al. evidences that it was conventional to have formatted said computer programs in a manner which allowed said programs to have been stored in the database computer as broadcastable teletext pages [note: lines 16-22 in the first column on page 560 of Hedger et al.; lines 42-47 in the second column on page 561 of Hedger et al.; and lines 1-6 in the first column on page 562 of Hedger et al.];

2) Hedger et al. evidences that, by broadcasting said computer programs as teletext pages, said computer programs could be downloaded to the TV receiver locations without affecting the broadcast of either the TV programming or the normal teletext services [see: lines 37-38 and 42-47 in the second column on page 561 of Hedger et al.; and lines 1-6 in the first column on page 562 of Hedger et al.]; and

3) Hedger et al. evidences that the MPUs in the TV receivers could in fact be selectively "reprogrammed" by the downloaded computer programming such that the TV receiver could be successfully operated as a computer terminal.

With respect to claim 2:

Hedger et al. taught that their newly formed computer terminals could be downloaded with programming which allowed the terminal to select teletext pages which met user entered search criteria [see lines 31-44 in the first column on page 564]. Given this application, the following is noted:

- a) The TV receivers in Hedger et al., which operated as personal computer terminals, correspond to the recited "receiver stations" in that they had at least one reprogrammable controller (ie the MPU), at least one output device (ie the CRT or the speaker of the TV receiver), and a processor (ie the signal processing circuities of the teletext decoder and of TV receiver);
- b) The TV receivers in Hedger et al., which operated as personal computer terminals, received an information transmission (i.e. the "Telesoftware") from a remote

station (i.e. the "broadcasting station") which contained downloadable executable code (i.e. the "Telesoftware");

c) The TV receivers in Hedger et al., which operated as personal computer terminals, included means (i.e. the MPU) for controlling a processor (i.e. the teletext decoder) to extract the downloadable code;

d) The TV receivers in Hedger et al., which operated as personal computer terminals, included means for processing "prestored user inputs" (i.e. user entered keywords and/or phrases which were used by the TV receiver to find teletext pages which met the search criteria set forth by the entered keyword and phrases) based on the extracted computer programming; and

e) The TV receivers in Hedger et al., which operated as personal computer terminals, inherently comprised means for controlling an output device (ie the CRT of the TV receiver) to have displayed mass medium programming (i.e. the teletext pages which were found in the search) on the basis of the second controlling step (ie on the basis of the search).

With respect to claim 4:

a) The recited "control signal" corresponds to the transmitted teletext pages in Hedger et al. which must be identified and extracted at the by the teletext decoder circuitry in the TV receivers. Such teletext decoder inherently comprised: means for locating and extracting the teletext pages from the TV programming based on a predetermined timing pattern (ie in response to horizontal and vertical sync signals); and means for identifying and assembling one of the extracted teletext pages for display in response a "signal word"/"pattern of signal composition" (ie in response to detected CRI signals, Magazine numbers, etc....).

With respect to claim 5:

a) For the TV receiver in Hedger et al. to have detected and received the teletext pages corresponding to the desired "Telesoftware", the teletext decoder would have to have received and stored user inputs which identified said pages.

With respect to claim 6:

a) The limitations of claim 6 are met for the same reasons that were expressed for claim 4 above. Specifically: the "Telesoftware", which was used to search for (i.e. to locate, to identify, and to assemble for display) those teletext pages which met the user entered search criteria, corresponds to the recited "downloadable executable code" in that it was both received by and transmitted from the TV broadcasting station; and the teletext pages which were processed by the downloaded "Telesoftware" correspond to the recited "one or more control signals" in that they must be detected/identified in order for the "Telesoftware" to have been executed.

With respect to claim 7:

a) The teletext pages and "Telesoftware" were both embedded in the TV signal.

With respect to claim 9:

a) The "Telesoftware" was transmitted as teletext pages.

28. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Pargee, Jr.

Pargee, Jr. disclosed a television distribution system which comprised:

- a) a remote data source [see figure 1];
- b) means for storing a plurality of datum each of which inherently comprised an information signal and identifying datum [ie the tape devices 3,4,5, and n of figure 1 which store datum comprised of video frame(s) and the index data required to locate the video frame(s) for retrieval&transmission];
- c) means for receiving a query [controller 1 of figure 1 which receives queries on telephone line 2 from the receiver station(s) of figure 3]; and
- d) means, located at the receiver stations, for storing transmitted information signals and for selectively retrieving said stored signals in response to a received and "assembled" control signal in order to produce a user specific display [ie tape 41 of figure 3 which selectively produces a display in response to a

control signal (i.e. the frame selection signal of figure 6) assembled from user inputs].

29. Claims 2-9, 11-14, 29-33 39-42 and 45-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Zaboklicki.

1) The showing of Zaboklicki:

As is illustrated in figures 1 and 3, Zaboklicki disclosed a subscriber station which operated under control of downloaded "Telesoftware" so as to have displayed units of video, audio, alphanumeric, and/or graphics data based on a viewer's/participant's reaction to previously displayed units of data [see: the last paragraph on page 9; lines 13-18 on page 10; lines 16-25 on page 11; lines 1-6 on page 12; lines 14-22 on page 12; lines 2 and 3 on page 13; lines 20-24 on page 18; and lines 18-26 on page 21]; i.e. wherein the term "Telesoftware", by definition, referred to the downloading of computer programming formatted as pages of a "normal"/conventional teletext service. As is illustrated in figure 1 and 4, the subscriber station includes means for monitoring the viewer's/participant's reactions to the displayed units of data and for communicating said monitored

reactions to a remote data collection station [see: lines 1-3 on page 8; lines 14-22 on page 12; lines 2 and 3 on page 13; and lines 1-18 on page 17].

2) With respect to claim 11:

The system disclosed by Zaboklicki included:

- a) means for inputting a specific subscriber input which corresponds to an inputted viewer's/participant's reaction [input 2 of figure 1; and input 34 of figure 4];
- b) means for assembling a control signal [the output 46 of figure 4], by processing designated instruct signals [the outputs of control circuit 32 and of circuits 29-31], in response to the detection of said inputted reaction; and
- c) means for transferring the assembled control signals to a remote collections station [note: the telephone line 46; and lines 1-3 on page 8; and lines 2 and 3 on page 13].

****the art of record has been applied to claim 11 to the extent of the examiner's understanding in view of the section 112 problems set forth above****

3) With respect to claims 12-14:

The system disclosed by Zaboklicki included: means for storing a subscriber instruction to receive mass medium programs [i.e. CPU 6 of figure 1]; means for receiving, processing, and displaying one or more units of data, representing mass medium programs, based on said instructions [i.e. 4 and 8 of figure 1]; means [i.e. 3 of figure 1] for detecting and extracting data and instruct signals [ie said "Telesoftware"] from a received information transmission [i.e. the signals received @ input 1] wherein said extracted data is passed to a processor [ie CPU 6 of figure 1] in order to program said processor.

****the art of record has been applied to claim 12-14 to the extent of the examiner's understanding in view of the section 112 problems set forth above****

4) With respect to claims 29, 32, and 33:

The system disclosed by Zaboklicki included a plurality of receiver stations [figure 3] each of which included a

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broadcast or cablecast mass medium program receiver (54), at least one output device (printer 37, CRT of receiver 54, etc...), a control signal detector (26, 36, 40, 41, and 57), and at least one computer or processor [6]. The receiver stations operated: to have detected the pages of teletext data which contained desired "Telesoftware" (i.e. @ 40); to have extracted the desired "Telesoftware" from the detected pages (i.e.@ 40); to have communicated the extracted "Telesoftware" to the processor (@ 39); and to assemble a *control signal* in response to said communicated "Telesoftware" (an outputs of 6 or 49). The following is noted:

- a) the "Telesoftware" in Zaboklicki is inclusive of the recited *instruct signal*, the recited *code or datum*, and the recited *one or more control signals*;
- b) the means at the transmitter, which formatted the "Telesoftware" and headers into teletext pages, inherently provided the recited receiving and transferring steps (i.e. the fact that the system disclosed by Zaboklicki transmitted "Telesoftware" as teletext pages requires the transmitter side of the

system to have comprised means for producing and transmitting said "Telesoftware" pages);

c) The "Telesoftware" in Zaboklicki represented computer programming and therefor comprised executable code;

d) The mass medium programming in Zaboklicki included the display of text and therefor comprised text.

5) With respect to claims 39 and 40:

The receiver stations in Zaboklicki comprised:

a) means (36,40,57,41) for outputting a "detection" signal comprised of extracted text, control, and telesoftware datum only when received cablecast control signals were present and detected within the received programming; ie said means did not detect and did not output the detection signal when the cablecast signals were not present; and

b) means for inputting the "Telesoftware" and "program fragment identification codes" (ie an "instruct-to-react signal") directly into to processor 6 so that the processor could assemble a control signal (@ the output of CPU 6) which identified ones of the program

fragments (i.e. "specific information") to be displayed in "reaction" to inputs entered by the user [note lines 18-26 on page 21].

6) With respect to claims 41 and 42:

The "Telesoftware" and the "program fragment identification codes" in Zaboklicki controlled processor 6 so as to have operated the tuner in the TV receiver to select different channels [note: lines 5-18 on page 10; and lines 1-6 on page 12].

7) With respect to claim 45:

The system disclosed by Zaboklicki included a plurality of receiver stations [figure 3] each of which included a broadcast or cablecast mass medium program receiver (54), at least one output device (printer 37, CRT of receiver 54, etc...), a control signal detector (26, 36, 40, 41, and 57), and at least one processor [6]. The receiver stations operated: to have detected the pages of teletext data which contained desired "Telesoftware" (i.e. @ 40); to have extracted the desired "Telesoftware" from the detected pages (i.e.@ 40); to have communicated the extracted "Telesoftware" to the processor (@ 39); and to assemble a

control signal in response to said communicated

"Telesoftware" (an outputs of 6 or 49). The following is noted:

- a) the "Telesoftware" in Zaboklicki corresponds to the recited *instruct signal*;
- b) the headers of the teletext pages which carried the "Telesoftware" in Zaboklicki correspond to the recited *one or more control signals*; and
- c) the means at the transmitter, which formatted the "Telesoftware" and headers into teletext pages, inherently provided the recited receiving and transferring steps (i.e. the fact that the system disclosed by Zaboklicki transmitted "Telesoftware" as teletext pages requires the transmitter side of the system to have comprised means for producing and transmitting said "Telesoftware" pages).

8) With respect to claims 30 and 46:

The examiner notes that teletext data, by definition, is embedded in the vertical blanking intervals of TV programming.

9) With respect to claims 31, 47 and 48:

The receivers or receiver stations of the system disclosed by Zaboklicki further included a switch [38 of figure 4] which communicated signals to a remote transmitter site from a memory of the receiver [note: claim 16 on page 4; lines 6-10 of page 14; lines 17 and 18 of page 13; and elements 29, 30, 31 of figure 4]. Switch (38) of figure 4 was controlled by the output of 32 to have determined which control signal from sources 29, 30, and 31 was to have been transmitted via line 46 at any given time.

10) With respect to claim 49:

The transmitter in Zaboklicki did transmit control signals which caused the receiver stations to tune to different TV channels to receive video signals containing specific answers/"instructions" [note: the last paragraph on page 9; lines 1-6 on page 12; and lines 20-24 on page 18].

11) With respect to claims 2-9:

Claims 2-9 are rejected for the same reasons that were set forth for claims 11-14 above.

30. Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Block et al.

As is illustrated in figures 3 and 4, Block et al. disclosed a system for broadcasting premium TV programming. The system comprised:

- a) a receiver station [ie the receiver structure of figure 4];
- b) means for identifying and monitoring a resource/signal by identifying and monitoring a resource code (ie a mass medium TV program identification code) embedded in said resource/signal [ie code detector 64 of figure 4 and/or the circuitry of figure 6];
- c) means for storing a record of the used of said resource [68 of figure 4]; and
- d) means for communicating the use of said resource to a remote station [ie unit 32 which transmits information back to the broadcast station of figure 3].

****the art of record has been applied to claim 15 and 16 to the extent of the examiner's understanding in view of the section 112 problems set forth above****

31. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Breeze.

Breeze disclosed tuning system for automatically controlling the receiver/tuner of a TV receiver to receive a desired one of a plurality of concurrent TV programming transmissions based on channel "identification signals" embedded in each of a plurality of concurrent programming transmissions [see: lines 19-30 in the first column on page 236; the second column on page 236; and figures 6-8 on page 236] . The system comprised:

- a) an antenna and said tuner/receiver for inputting at least some of said plurality of transmissions to a signal processor;
- b) said tuner/receiver for selectively demodulating and passing one of a plurality of concurrent TV signal transmissions to said processor; and
- c) said processor which included:

- 1. means for receiving and detecting the embedded identification signals associated with the passed one of the TV signal transmission, wherein said identification signals uniquely identified a specific signal content of the passed transmission

(ie it identified the TV channel comprised by the passed transmission);

2. means for providing a comparison signal to a processor [ie the user entered "desired channel code"];

3. comparison means for generating a control signal [see figure 8];

4. means for controlling the tuner/receiver to select/pass the desired channel (ie the channel corresponding to the desired channel code) in response to the control signal generated by said comparison means;

5. means for responding to an instruct signal for assembling/generating said control signal [i.e. said entire processor].

32. Claims 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Zawels et al. (US #3,606,688).

1) The showing of Zawels et al.:

As is illustrated in figure 1, Zawels et al. disclosed an interactive TV system which comprised a teacher's station (20) and student stations (60). At the teacher's station,

interactive programming was produced by combining (@ 7) "received" video and audio programming (generated @ 19) with control signals (ie @ 14) which were produced by "encoding" (@9) "received" instruction (ie received @ input 8). The combined signal was then transmitted to the student stations via a conventional TV broadcast. At the student stations, the control signals were recovered from the combined signal by detecting and extracting said control signals(i.e. @ 26,28, 29 and 59). The video and audio programming of the combined signal were displayed on a TV receiver (@ 21) while the extracted control signals were inputted to a "processor" (i.e. the structure of station 60 excluding said receiver and the control signal detecting and extracting circuitry).

1) With respect to claims 39 and 40:

- a) The student stations included means for detecting and extracting the control signals in the combined signal only when such signals were present; i.e. if the signals were not present then they could not, and would not, have been detected;
- b) The extracted control signals included codes which directly inputted to the processor to enable portions

of the processor to react to user inputs during given periods of time (ie an "instruct-to-react signal" [see lines 63-75 of column 8];

c) The processor was controlled by said inputted codes so as to have assembled a control signal which was used to output (via counters 46 and 49) specific information to the students (i.e. the number of right and wrong answers);

d) The receiver includes buffers for buffering inputs to the processor (ie 29,59, etc...).

33. Claim 43 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Summers.

Summers disclosed a system which, on the transmitter side (see figure 1), included means (4) for encoding data (from 6 and 8) into either the active picture area or the vertical blanking interval of a TV signal (from 2). The TV signal, encoded with said data, was then transmitted (via transmitter 12) to a plurality of receiver stations. Each of the receiver stations (see figure 2) included means for extracting the data from the transmitted TV signal and means

for processing the extracted data. With respect to claim 43, the following is noted:

- a) Each of the receiver stations in Summers included a TV receiver (14) for receiving and demodulating the transmitted TV signal and means (i.e. computer 36) for assembling a control signal (not illustrated) in response to a detected instruct signal (i.e. from elements 16-26);
- b) Each of the receiver stations in Summers included at least one clock (34) for outputting timing signals;
- c) Each of the receiver stations in Summers included the computer (36) which was operable in order to have delayed the passing of the instruct signal to a controllable apparatus in response to a timing signal such that the instruct signal did not have to be transmitted in real time(SEE: lines 38-45 and lines and 56-68 of column 7).

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zawels et al. (US #3,606,688) in view of Zawels (DE 2,853,764).

1) The showing of Zawels et al.:

As is illustrated in figure 1, Zawels et al. disclosed an interactive TV system which comprised a teacher's station (20) and student stations (60). At the teacher's station, interactive programming was produced by combining (@ 7) "received" video and audio programming (generated @ 19) with control signals (ie @ 14) which were produced by "encoding" (@9) "received" instruction (ie received @ input 8). The combined signal was then transmitted to the student stations via a conventional TV broadcast. At the student stations, the broadcasted signal was separated back into component

form such that the video and audio programming were displayed on a TV receiver (@ 21) and the control signals were used to "direct a processor" (ie the structures of station 60 excluding said receiver) to produce specific effects; ie wherein said effects include at least simulated "overlays" of supplemental programming [note: lines 1-8 of column 9; lines 10-55 of column 10].

2) Differences & Obviousness:

The claims differ from the system disclosed by Zawels et al. only in that the claims require the interactive TV programming (ie that produced by teacher's station 20 in Zawels et al.) to have been stored. Zawels has been cited because it not only cites Zawels et al. as having illustrated the environment to which it was directed (see the second full paragraph on page 2), but it clearly evidences that the recording of the combined signal was a recognized alternative to its broadcast [see lines 25-26 on page 6]. It is maintained that it would have been obvious to one skilled in the art to have recorded/"stored" the combined signal produced by the teacher's station in Zawels

et al. in view that Zawels evidenced such to have been a known and obvious alternative method of distribution.

36. A series of interviews were held before prosecution began on this application. Unless identified specifically below in this part of the action, these interviews did not address the merits of any single application, but rather issues that are appropriate to all of the related "Harvey" applications.

The first interview was held on August 13, 1995. It was a personal interview. Attending were one of the applicants, Mr. Harvey, and his attorneys, Messrs. Scott and Woolston. Representing the PTO were Messrs. Godici, Yusko, Orsino, and Groody. Mr. Harvey and his attorneys were informed that because of the large number of related applications, the examination would be performed by a team of examiners. As of the August 1995 interview there existed a problem with some of the applications being charged large entity fees when applicants believed that small entity status was deserved. The PTO has referred this matter to the Office of Assistant Commissioner of Patents, specifically Hiram Bernstein, a petitions attorney. Mr. Harvey's representatives will attempt to resolve this issue through Mr.

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Bernstein. At this time all of the related cases had not been received in the Group. No examination was planned until at least late October because the team members were managers, and needed to complete other end of fiscal year assignments and all employee performance ratings. The PTO requested that any amendments to the specification, other than to correct continuing status, be delayed. Mr. Harvey's representatives stated that no other amendments to the specification were actually planned. The PTO's goal will be to attempt to reduce the amount of paper passed between applicant and PTO since the cases are related and very difficult to move from cite to cite because of their size. Copies of the prior art only need to be filed once. The PTO will only send newly cited art once. Preliminary amendments are being prepared. The PTO however cautioned that the prosecution of the applications will not be delayed until applicants have filed these amendments. The PTO requested a chart establishing any relationships between cases and what parts of applicants' disclosure related blocks of cases were directed to. It was not, at this time, determined whether this chart would become part of the official file. The PTO planned to research this. It was the PTO's intent to examine related cases simultaneously. The PTO

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welcomed any claim amendments to include resubmissions of all claims, whether amended or not. Mr. Harvey's representatives were informed that the issue of double patenting was expected to be a major issue.

On November 2, 1995, a telephonic interview was held between Mr. Woolston and Mr. Groody. Mr. Woolston indicated that two prior art statements were being completed, one for cases with a 1987 effective date, the other for cases with a 1981 effective date.

On November 30, 1995, a personal interview was held. Representing applicants were Messrs. Scott, Woolston, and Grabarek. Representing the PTO were Messrs. Yusko, Orsino, and Groody. The content of a simultaneously filed prior art statement was discussed. The PTO's copies of the parent files are missing the non-U.S. patents cited therein. The PTO requested copies of those prior art documents. Applicants gave the PTO a document showing which cases have already been amended. Since this document merely shows the status of any amended application, it has not been made part of the file record since that paper has no bearing on the merits of any issue before the PTO.

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A second interview was held on later on November 30, 1995 between Mr. Scott and Mr. Groody. The sole topic discussed was double patenting. The discussion led to no conclusions on whether a double patenting rejections would be made in these applications.

An interview was held on December 6, 1995 between Mr. Scott and Mr. Groody. The discussion was directed to In re Schneller, 158 USPQ 210 (CCPA) and whether that decision will necessitate a double patenting rejection in any of these cases. Mr Scott was asked whether a terminal disclaimer could be filed in all of the 327 related cases to obviate a possible double patenting rejection in each of these cases over each other. Mr. Scott agreed to consider this.

An interview was held on December 13, 1995 between Mr. Scott and Mr. Groody regarding the terminal disclaimer question above. Mr. Scott proposed filing a terminal disclaimer in about 250 of the 327 cases over each other if the PTO would have each of the about 250 issue within 4 or 6 months of each other. Mr. Groody felt that the PTO would be unwilling to suspend prosecution in some cases just to have other related cases issue close to each other. No agreement was reached.

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Two interviews were held between Mr. Scott and Mr. Groody on April 2, 1996. Mr. Scott pointed out that, in parent file 5,233,654, there had been a restriction requirement. After reviewing the file, Mr Groody indicated that there would not be a Schneller double patenting rejection made in any case based on parent patent 5,233,654 and 5,335,277. The action recently sent out in 08/113,329 would be changed to reflect this point. Mr. Scott inquired whether a terminal disclaimer, in these applications, would have to be filed for all of the four Harvey patents (4,694,490; 4,704,725; 4,965,825; 5,109,414). Mr. Groody felt that all four should be disclaimed, if applicants elect to take that approach toward overcoming the double patenting rejections, because of the requirement in terminal disclaimers concerning common ownership. Mr. Scott indicated that in parent patent 4,965,825, there had been a multiplicity rejection. Mr. Groody will order the file, but felt that rejection would not overcome the Schneller double patenting rejections since the CCPA did not list this situation as an acceptable reason to file continuing cases. The Court limited it exception to "independent and distinct" claims. Mr. Groody acknowledged that the Board of Appeals may accept the multiplicity argument, but, in the absence

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of case law on this issue, he would still apply the Schneller rejections.

On June 10, 1996, Mr Scott spoke with Mr. Groody on several topics. Related case 08/397,582 has been withdrawn from issue in Group 2200, and a new action will be mailed containing a double patenting rejection under *In re Schneller*. This application will now be examiner in Group 2600. Mr. Scott questioned whether applicants can withdraw the terminal disclaimer made in 397,582. Mr. Groody was unsure of the answer, but later checked with Mr. Orsino, who informed him that MPEP 1490 controlled.

Mr. Groody still believes that 08/113,329 can be expedited at the Board. Mr. Scott can refer to the appeal brief to be filed in that case in responding to any application having a *Schneller* double patenting rejection.

A telephone interview was held on June 12, 1996 between Mr. Thomas Woolston and Marc E. Bookbinder representing the PTO. For S.N. 08/448,116, Mr. Woolston indicated that the supplemental preliminary amendment of Nov. 13, 1995 was incomplete and that a complete version of such would be filed shortly to perfect the submission as originally intended. Mr. Woolston also indicated

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that he intended to file a second supplemental preliminary amendment in this case bringing the total number of claims to 37.

Mr. Bookbinder indicated that the Group would like to have a complete grouping of applications in a manner that was submitted earlier for only a portion of the total filings. Mr. Woolston stated that such a grouping was available and that he would forward it to the Group as soon as possible.

Mr. Bookbinder requested that each future amendment filed be accompanied by an electronically readable version thereof. Mr. Woolston stated that he could provide a disk to include one or more amendments made to applications as they were filed.

Mr. Woolston stated that he has reviewed actions that have been mailed and that he takes issue particularly with the double patenting rejections and the way In re Schneller has been applied. Mr. Bookbinder suggested that Mr. Woolston contact Mr. Groody of Group 2600 to discuss the particulars of the double patenting rejections since he was the author of those rejections.

On November 25, 1996, a telephone interview was held between Mr. Scott and Mr. Groody. Mr. Groody informed Mr. Scott that expedited processing at the Board for 113/329 would be arranged by the Office. No action on applicants' part was necessary.

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Applicants no longer had to submit a listing of related cases, since the examiners did not need that. Finally, application serial number 08/397,582, which has been withdrawn from issue, will be examined over all of the art cited in all of the later filed Harvey cases.

37. The art cited in the information disclosure statements submitted by applicants has been considered. The examiner initialed 1449 forms will be sent in a later action.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Groody whose telephone number is (703) 308-5461.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.


ANDREW FAILE
PRIMARY EXAMINER
GROUP 2600